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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,180	10/02/2003	Hiroshi Aoyama	P10021US	8335
58986 7590 01/24/2007 THE RAFFERTY PATENT LAW FIRM 5641 BURKE CENTRE PKWY SUITE 100 BURKE, VA 22015-1731			EXAMINER NGUYEN, DONGHAI D	
			ART UNIT 3729	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/24/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/677,180	Applicant(s) AOYAMA ET AL.	
	Examiner Donghai D. Nguyen	Art Unit 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) 15-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,7,9 and 14 is/are rejected.
- 7) ☒ Claim(s) 2,4-6,8 and 10-13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) ☐ Notice of References Cited (PTO-892) | 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) ☐ Notice of Informal Patent Application |
| 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) ☐ Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment filed on November 27, 2006 has been considered and made of record.

Election/Restrictions

2. Applicants' traversal of the restriction between Groups I-II in the reply filed on November 27, 2006 is acknowledged. The traversal is on the ground(s) that Groups I-III are related and substantially similar (see "Remarks" pages 12-13) and that Group II is generic to both Groups II and III. This is not found persuasive because of the reasons provided in the previous Office Action and because of additional reasons such as: the invention of Group I can be use to practice another and material different process different than Group II such as driving each coaxial revolvers independently by a plurality of servo drives; Group II does not have coaxial revolvers as required by Groups I and III and/or Group II and III does not require the each of the end-effectors being rotated in sequential order. Therefore the requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 7, 9 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 4,951,388 to Eguchi et al.

Regarding claim 1, Eguchi et al disclose a chip transfer apparatus for transferring chips (14) onto works (11), the apparatus comprising: a first carrier (5) configured to carry chips (14) thereon; a second carrier (10) configured to carry works (11) thereon; a plurality of end-effectors (6a) configured to receive chips (14) from said first carrier (5) and to transfer the chips onto the works (11) carried by the second carrier; a first plurality of coaxial revolvers (6b), each of which has said one of said end-effectors, each of the coaxial revolvers configured to revolve around one common axis independently (see Fig.2); and a plurality of servo drives (two are shown as 12 and Q), each configured to drive a respective one of said coaxial revolvers independently and to change a periodic revolving speed and phase of the respective coaxial revolver (Col. 4, lines 49-52 and Col. 5, lines 1-2), wherein each of said end-effectors (6a) is affixed to a respective one of said coaxial revolvers (6b) and distributed in one common circle around said one common axis (see Fig. 3), wherein each of said end-effectors rotates in sequential order in a periodic motion by the action of said servo drives, and wherein a respective revolving speed and phase of each of the end-effectors is independently changed during the periodic motion (see Fig. 2 and Col. 4, lines 49-52 and Col. 5, lines 1-2).

Regarding claim 3, Eguchi et al disclose each of the servo drives (Q or 12) is configured to individually and independently change the periodic revolving speed and phase control of a respective one of the coaxial revolvers (Col. 4, lines 49-52 and Col. 5, lines 1-2).

Regarding claim 7, Eguchi et al disclose the chips (14) are electronic parts, and wherein the works are IC card parts or RF tag parts in the form of sheets (see Fig. 2)

Regarding claim 9, Eguchi et al disclose the end-effectors (6a) include a pneumatic mechanism (see Fig. 1 to lower and lift the end-effectors).

Regarding claim 14, Eguchi et al disclose the servo drives (12) each respectively include a motor operatively connected to a drive wheel, and wherein each drive wheel is operatively connected to an outer race of the first plurality of bearings not fixed to the rigid frame (see Fig. 2).

Allowable Subject Matter

5. Claims 2, 4-6, 8 and 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments filed November 27, 2006 have been fully considered but they are not persuasive. Applicants argue that "EGUCHI does not teach or suggest at least the features of "each of the coaxial revolvers" being "configured to revolve around one common axis independently," nor that "each of said end- effectors is affixed to a respective one of said coaxial revolvers and distributed in one common circle around said one common axis" and "a respective revolving speed of each of the end-effectors is independently changed during the periodic motion"" (see "Remarks" page 19, last paragraph). The Examiner disagrees and refers Applicant to Eguch's Fig. 2 which shows at least one of each of the coaxial revolvers (6b) revolves around a common axis independently (i.e., at G position only the associated coaxial revolver is rotated

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but not other coaxial revolvers which means each of the coaxial revolvers being independently rotates a round its common axis) and Figs. 1 and 2 show that each of said end-effectors (6a) is affixed to a respective one of said coaxial revolvers (6b) and at least one of the nozzle/end-effector 6a of each coaxial revolver 6b being used for transferring or distributing of the chip in circle pattern which readable on the claimed “common circle of the application”. Further, regarding the “revolving speed of each of the end-effectors is independently changed during the periodic motion”, this does not seem to further limit the claimed structure. However, such function is met by Eguchi for Example: at stations D and F the nozzle/end-effector being revolved by the servo drives Q and the revolved speed must be changed from stop to slow to fast then back to slow and then stop.

Note: limitation recites “revolving speed” is functional of the apparatus, which does not further define any structure of the claimed apparatus and since the prior art teaches substantially every structural elements thereof it is capable of performing all the function set forth above. See mark up copy for designated “common axis”.

7. This application contains claims 15-18 drawn to an invention nonelected with traverse in the response filed on November 27, 2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donghai D. Nguyen whose telephone number is (571)-272-4566. The examiner can normally be reached on Monday-Friday (9:00-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter D. Vo can be reached on (571)-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DN
January 11, 2007



MINH TRINH
PRIMARY EXAMINER

